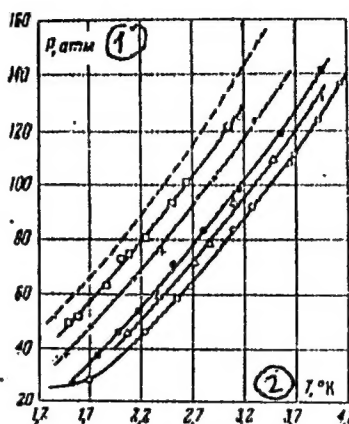S/056/62/043/005/056/058
B125/B104

The curves representing...

Fig. 1. Pressure at which the
solutions begin to solidify as
a function of temperature.

Legend: (o) 0% He^3, (Δ) 10.3% He^3;
(•) 24.1% He^3; (+) 53.0% He^3;
(□) 76.4% He^3; dotted line: Pure
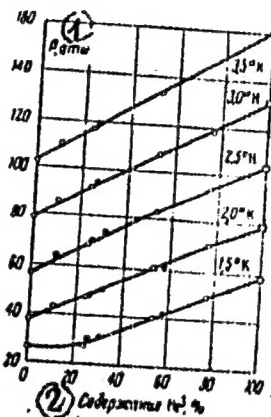He^3; (1) pressure in atmospheres;
(2) °K.

Card 3/4

The curves representing...

Fig. 2: The dependence of the solidification pressure of helium isotope solutions on the composition of the liquid phase: (o) the results of the present work; (•) the results obtained by the method of blocking of the capillary tubes; (□) data obtained by Grilly and Mills for pure He^3.

Legend: (1) P, atm, (2) percentage of He^3, %.

S/056/62/043/005/056/058
B125/B104

Card 4/4

AUTHORS: Yesel'son, B. N., Ivantsov, V. G., Shvets, A. D.

TITLE: The surface tension of He^3-He^4 solutions

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 2, 1963, 483-486

TEXT: The authors continue previous investigations (DAN SSSR, 99, 365, 1954) where they had measured the surface tension in an He^3-He^4 mixture up to 3% He^3; now they measured it up to 75% He^3. The experimental apparatus was the same as before, only some variations in size having been made. A temperature regulator kept the temperature constant with an accuracy of $5 \cdot 10^{-6}$ °K. The surface tension α was calculated with the relation $2\alpha(1/b_1 - 1/b_2) = (\varrho_1 - \varrho_v)gh$, where b_1 and b_2 are the radii of curvature of the lowest points of the menisci of the two capillaries ($r_1 = 2.89$ mm, $r_2 = 0.12$-0.22 mm), ϱ_1 and ϱ_v are the liquid vapor densities, g the gravity constant and h the distance between the lowest

Card 1/2

The surface tension of ...

$S/056/63/044/002/016/065$
$B102/B186$

points of the menisci. The errors in measurement were not above 4%, for He^3 concentrations up to 20% only about 1%. The $\alpha(T)$ curves were measured for 9.5, 15.0, 19.0, 50.0, and 75.7% He^3 between 1.3 and 4.2 $^\circ K$; they lie lower, the higher the He^3 content, between the curves for the pure components. The results are compared with the theory of I. Prigogine (Nuovo Cim. Suppl., 9, 1, 347, 1958). Agreement is found only for He^3 concentrations up to about 10%. There are 4 figures.

SUBMITTED: September 12, 1962

Card 2/2

BEREZNYAK, N.G.; BOGOYAVLENSKIY, I.V.; YESEL'SON, B.N.

Equilibrium diagram for the liquid - crystal system He^3 - He^4.
Zhur. eksp. i teor. fiz. 45 no.3:486-495 S '63.   (MIRA 16:10)

1. Fiziko-tekhnicheskiy institut AN Ukrainskoy SSR.
            (Helium isotopes—Thermodynamic properties)

L 13836-63   EPF(c)/EWT(1)/EPF(n)-2/BDS   AFFTC/ASD/SSD   Pr-4 P-4
...WA/...F(3)
ACCESSION NR: AP3003159   S/0056/63044/006/2187/2189

AUTHOR: Yesel'son, B. N.; Kovdrya, Yu. Z.; Lazarev, B. G.

TITLE: Direct measurements of the linear flow velocity of a film of He II

SOURCE: Zhurnal eksper. i teor. fiziki, v. 44, no. 6, 1963, 2187-2189

TOPIC TAGS: liquid helium, flow rate, low temperatures

ABSTRACT: Experiments were set up for obtaining detailed information on the
linear flow velocity and the formation of He II films. The experiments
consisted essentially of measuring the temperature at two different points
along the flow and determining the time dependence of the potential difference
between the two resistance thermometers. The experiments were carried
the temperature interval 1.5 to 2.1 K. The temperature was maintained ...
... The resultant flow rate increased with temperature ...
... Since this ... exceeds the critical velocity of previous
investigations, some explanation is advanced for this high rate. In
particular, it is suggested that the vortices do not have time to form during
the time of flow of the film, which is about 0.2 sec at 1.5"K. We take the
opportunity to thank V. D. Krasnikov for preparing the amplifier and ... ...
Cord 1/1.   for providing the wire of lead brass."

ACCESSION NR: AP4043620

AUTHORS: Bogoyavlenskiy, I. V.; Bereznyak, N. G.; Yesel'son, B. N.

TITLE: Measurement of the liquid-crystal equilibrium diagram of helium isotope solutions

SOURCE: Zh. eksper. i teor. fiz., v. 47, no. 2, 1964, 480-483

TOPIC TAGS: liquid helium system, binary phase diagram, polymorphism, solid phase, liquid phase

ABSTRACT: Continuing earlier work (ZhETF, v. 45, 486, 1963) on the determination of the liquid-solid diagrams of state of the isotope system He^3-He^4, the authors measured the curves of the start and end of solidification of solutions with molar concentration 53.6 and 76.5% He^3 and determined the width of the stratification region over the entire concentration interval. The temperature range covered was 1.4--4.0K. The coordinates of the triple points, con-

Card 1/2

ACCESSION NR: AP4043620

nected with the polymorphic transition into the solid phase, were
also determined for the investigated solutions. The equilibrium
diagram between the solid and liquid phase of the system was con-
structed and was found to be of the peritectic type in the pressure
range from 50 to 140 atm. "We thank B. G. Lazarev for interest in
the work and I. A. Shapoval for help with the measurements, corre-
sponding member AN SSSR N. Ye. Alekseyevskiy for providing the op-
portunity to carry out the mass-spectrometric analysis, and A. V.
Dubrovin for participating in these measurements." Orig. art. has:
2 figures and 1 table.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk SSSR
(Physicotechnical Institute, Academy of Sciences UkrSSR)

SUBMITTED: 21Mar64

SUB CODE: GP, TD

NR REF SOV: 003

ENCL: 00

OTHER: 003

Card 2/2

L 22915-66   EWT(1)/EWT(m)/EPF (n)-2/ETC(m)-6   JD/MW/GG
ACC NR: AP6006798   SOURCE CODE: UR/0386/66/003/001/0032/0035

AUTHORS: Yesel'son, B. N.; Dyumin, N. Ye.; Rudavskiy, E. Ya.;
Serbin, I. A.

ORG: Physicotechnical Institute of Low Temperatures, AN UkrSSR,
Khar'kov (Fiziko-tekhnicheskiy institut nizkikh temperatur AN UkrSSR)

TITLE: Experimental observation of fourth sound in He^3-He^4 solutions

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma
v redaktsiyu. Prilozheniye, v. 3, no. 1, 1966, 32-35

TOPIC TAGS: sound propagation, liquid helium, quantum liquid,
superfluidity

ABSTRACT: The purpose of the investigation was to check experimen-
tally the existence of fourth sound, a special type of wave propa-
gating only through the superfluid component while the normal com-
ponent remains immobile, which was observed experimentally in liquid
He^4 and whose existence in He^3-He^4 solutions was recently considered
theoretically by D. G. Sanikidze and D. M. Chernikova (ZhETF v. 46,

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L 22915-66
ACC NR: AP6006798

1123, 1964). The main part of the apparatus was a cylindrical resonator, 20 mm in diameter and 10 mm long, filled with a rouge filter consisting of particles ~0.5 μ in size compressed to 40 kg/cm^2 (filter porosity ~60%). The sound transmitter and receiver were placed on opposite sides of the filter. The resonator was placed in a special vessel in which the investigated solution was condensed. The vessel itself was placed in a bath of He^4, the temperature of which was lowered by pumping on helium vapor. Pulses with rise time 0.1 μsec, repetition frequency 200 cps, duration 2 μsec, and amplitude 400 V were fed from the blocking generator to the transmitter, which was located in the lower part of the receiver. The speed of the fourth sound could be determined from measured time interval necessary for the pulse to traverse the length of the filter. Multiple scattering was allowed for by means of an empirical formula. The experimental results were found to be in fully satisfactory agreement with theory of D. G. Sanikidze and D. M. Chernikova. Tentative measurements of the absorption coefficient indicate that it increases rapidly with temperature, making measurements near λ point difficult. Work is now continuing in a broader temperature concentration range,

Card   2/3

L 22915-66
ACC NR: AP6006798

with an aim at obtaining information on the behavior of He^3 and He^4
atoms in narrow channels. The authors thank D. G. Sanikidze for
useful discussions conducted with the organization of the research.
Orig. art. has: 1 figure.

SUB CODE: 20/   SUBM DATE: 15Nov65/ ORIG REF: 003/ OTH REF: 008

Card   3/3

ACC NR: AP7003203

SOURCE CODE: UR/0056/66/051/006/1665/1668

AUTHOR: Yesel'son, B. N.; Dyumin, N. Ye.; Rudavskiy, E. Ya.; Serbin, I. A.

ORG: Physicotechnical Institute of Low Temperatures, Academy of Sciences, Ukrainian SSR (Fiziko-tekhnicheskiy institut nizkikh temperatur Akademii nauk Ukrainskoy SSR)

TITLE: Velocity of first sound in He^3 - He^4 solutions

SOURCE: Zh eksper i teor fiz, v. 51, no. 6, 1966, 1665-1668

TOPIC TAGS: liquid helium, sound propagation, acoustic speed, temperature dependence, superfluidity

ABSTRACT: The authors describe measurements of the velocity of first sound in solutions of helium isotopes with He^3 content up to 20% in the temperature range 1.6 - 4.0K. The purpose of the investigation was to determine various properties of the solutions, especially the velocity of fourth sound. A pulsed ultrasonic method was used for the velocity determination. The carrier frequency was 1 MHz, the pulse duration was 30 μsec, and the pulse repetition frequency was 200 Hz. The results show that at constant temperature the sound velocity varies linearly with the He^3 concentration. An explanation is proposed for this linearity. The temperature dependence of the velocity of first sound shows clearly the singularities corresponding to the transition of the solution into the superfluid state, and the values obtained for the λ-point temperatures from these temperature dependences agrees well with the published data. Orig. art. has: 2 figures, 5 formulas, and 1 table.

SUB CODE: 20/   SUBM DATE: 18Jul66/   ORIG REF: 002/   OTH REF: 005

Card   1/1

SOV-120-58-1-1/43

AUTHORS: Mal'nev, A. F., Yesel'son, M. P., Kremenchugskiy, L. S.

ABSTRACT: In recent years infra-red spectroscopy has become impor-
            tant in connection with the solution of industrial and analy-
            tical problems. The possibility of application of infra-red
            spectroscopy to analytical problems was first established in
            1881, when Ebney and Festing discovered that all the hydro-
            carbons absorb radiation of wavelength $\sim 3.4\ \mu$. During the
            years 1905 to 1908 investigations of hydrocarbons have led
            to the discovery of other bands characteristic of the funct-
            ional groups (c-H, OH etc). However, experimental difficul-
            ties prevented further development of the methods of infra-
            red analysis. The prototype of contemporary infra-red spectro-
            meters and spectrophotometers is the "ultra-red spectrograph"
            constructed by P. N. Lebedev (Refs.1-3). Because of their
            sensitivity, speed and accuracy, the methods of infra-red
            analysis were applied from the very outset to the solution

Card 1/4

The Main Principles of Recording of Spectra, Using Infra-Red Spectra
Photometers (A Review)

of chemical problems and were then widely used in industrial
laboratories. At the same time infra-red analysers of the
non-dispersive and dispersive types were developed for work
in industry, where they were used for continuous control
purposes and the control of the manufacturing cycle. Fast
operating spectrometers and spectrophotometers were produced
which were used to study reaction kinetics which recorded
spectra over time intervals comparable with the time taken
by the process (10^{-5} - 1 sec). Considerable attention was
given to the construction of spectrophotometers. In these
instruments the radiation from the source was divided into
two beams, one of which (the "specimen beam") is passed
through a vessel containing the specimen under investigation
and the other (the "comparison beam") is passed through a
comparison vessel containing a substance whose spectrum it
is desired to exclude from the spectrum of the specimen. The
ratio of the intensities of the two beams or their logarithms

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SOV-120-58-1-1/43

The Main Principles of Recording of Spectra, Using Infra-Red Spectro-
photometers (A Review)

are then recorded either by a pen recorder or on a CRO screen.
The advantage of spectrophotometers as compared with spectro-
meters is their independence of changes in the intensity of
the radiation emitted by the source, the sensitivity of the
receiver and the measuring apparatus. In the present paper
the main methods of recording of spectra using spectrophoto-
meters are described and are classified as follows:
(1) The compensation method or "null method", as used by
Hardy (Ref.37), White and Liston (Refs.8-11), Malyshev et al
(Refs.20, 21, 27 and 55), Terenin et al (Ref.53), and others;
(2) The "two beam" method as used by Daniel and Brackett
(Ref.72), Savitsky and Halford (Ref.65), and others;
(3) The phasometric method suggested by Bianov-Klyukov (Refs.
99-103), and also by Golay (Ref.104);
(4) The method using a memory-device, as used by Avery (Ref.
106), Donner (Ref.109), Mal'nev et al (Ref.107), and others.
The problem of accuracy and reproduceability has been con-
sidered by many authors (Refs.141-164) but there is a need
for fundamental work on the comparison of different types of
spectrophotometers. Generally speaking, spectrophotometers
based on different principles give relatively the same results

Card 3/4

SOV-120-58-1-1/43

The Main Principles of Recording of Spectra, Using Infra-Red Spectro-
photometers (A Review)

(Refs.189 and 190). It is generally believed that the spectro-
photometers using the "null" method are the most reliable. At
the present time there is a noticeable tendency to replace
mechanical parts in the measuring part of the spectrophoto-
meter by the equivalent electrical circuits. However, this
group is not very numerous as yet (Refs.77, 89, 97 and 99).
There are 17 figures, no tables and 195 references, most of
which are Western.

ASSOCIATION: Institut fiziki AN USSR (Institute of Physics of the
Academy of Sciences USSR)

SUBMITTED: May 9, 1957.

1. Infrared spectrophotometers--Development   2. Infrared spectrophotom
eters--Applications   3. Infrared spectrophotometers--Performance
4. Infrared spectrophotometers--Equipment

Card 4/4

7 (3), 24 (7)   SOV/48-23-10-28/39
AUTHORS: Mal'nev, A. F., Yesel'son, M. P.,
              Kremenchugskiy, L. S.

TITLE: A Measuring Device for the Infrared Spectrometer

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959,
              Vol 23, Nr 10, pp 1246-1247 (USSR)

ABSTRACT: Infrared spectrometers are being used to an increasing extent
              in chemistry, petroleum refineries (automatic control of the
              technological cycle) and for research work in works laboratories.
              In the present paper a measuring system for such a device is
              briefly described. The device consists essentially of a
              bolometer bridge, a pre-amplifier, the main amplifier with
              synchronous detector, a modulator-generator with phase
              inverter and a feeding block. Radiation is first interrupted
              by a modulator (constructed together with S. Z. Shul'ga)
              (20 cycles), after which it passes through a monochromator and
              reaches the receiver. The latter is a nickel bolometer
              developed at the Institut fiziki AN SSSR (Institute of Physics
              of the AS USSR). The next stage is the preamplifier, from which
              the pulses reach the main amplifier block the elements of
              which are briefly discussed. The emerging signals may be

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A Measuring Device for the Infrared Spectrometer   SOV/48-23-10-28/39

transmitted either to a recorder or to an oscillograph. A
block scheme of this measuring system is given. After half
an hour's pre-heating the amplification coefficient of the
system remains constant (variation $\leq$ 0.5%). For research work
the measuring device is used together with a spectrometer of
the type VIKS-M3, and for periodical controls in industry,
together with a spectrometer of the type VIKS-M4 (both devices
were constructed at the IFAN UkrSSR). There are 1 figure and
4 Soviet references.

Card 2/2

MAL'NEV, A.F. [Mal'niev, A.F.]; YESEL'SON, M.P. [Imsel'son, M.P.];
KREMENCHUGSKIY, L.S. [Kremenchuhs'kyi, L.S.]

Measuring device for determination of small energies in spectral
investigations. Ukr.fiz.zhur. 5 no.3:380-385 My-Je '60.

(MIRA 13:8)

1. Institut fiziki AN USSR.
                    (Spectrum analysis)

MAL'NEV, A.F.; YESEL'SON, M.P.

New measuring device for IKS-11 and IKS-12 spectrometers. Ukr. fiz.
zhur. 5 no.2:285-286 Mr-Ap '60.   (MIRA 13:12)

1. Institut fiziki AN USSR.
                    (Spectrometer)

24.3400

26594

S/185/60/005/003/009/020
D274/D303

AUTHORS: Mal'nyev, A.F., Yesel'son, M.P. and Kremenchugs'kyy,
L.S.

TITLE: A measuring device for spectral investigations of
low energies

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 5, no. 3, 1960,
380-385

TEXT: A device is described which is used with spectrometers and
other spectral instruments for the measurement of energies of the
order of 10^{-9} watt. (Second part of the article). In the first
part of the article, the most effective ratio is found for resis-
tances of the bolometer bridge arms. This optimum ratio has not
been dealt with in literature. An equivalent circuit is shown of
a bolometer bridge with transformer. In the case of optimum mat-
ching, the amplification factor of the transformer increases with
decreasing R_{out}. In choosing the ratio between the bridge arms,

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A measuring device...   26594   S/185/60/005/003/009/020
D274/D303

one ought to reduce R_{out} and increase the transfer constant K_t.
R_{out} can be reduced, with fixed K_t, if R_2 is reduced (i.e. $R_2 < R_1$).
A detailed study of this problem shows that the conditions for max-
imum amplification of a system bridge-transformer and a maximum
transfer constant of the bridge circuit are given by the same rela-
tionships, viz. $R_2 \ll R_1 : R_3 \gg R_1$ (i.e. $K_t \to 1$, $R_{out} \to R$); these
conditions give the optimum connection of the bolometer (with res-
istance R_1) to the bridge circuit; R_2 and R_3 denote the resistances
of the bridge arms.   The total value of $R_1 + R_2$ should be chosen so
as not to overload the current source; in practice, $R_3 = (3$ to $5)$
R_1 and $R_2 = (0.1$ to $0.3) R_1$. Hence a bolometer with two equal arms
does not lead to optimum performance of circuit. The measuring de-
vice is described then. A nickel bolometer of 20 Ohm resistance
is placed at the focus of a monochromator mirror. The balancing
resistors are in the same unit with the pre-amplifier and trans-
former. The total amplification of the input unit is 2.10^5. The
natural noise-level of the device is several times below that of

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A measuring device...   26594   S/185/60/005/003/009/020
                                          D274/D303

the bolometer. The main amplifier includes a synchronous rectifier
and an oscillator. The device is supplied by a stabilizer with a
two-stage d.c. amplifier. The spectrum of water vapor and carbon
dioxide, as registered by the spectrometer VIKS-3 by means of the
device, is shown in a figure. The device is used in laboratory
investigations in conjunction with the spectrometer VIKS-3 and in
plants with the spectrometer VIKS-4. It can be also used in the
spectrometers IKS. There are 4 figures and 4 Soviet-bloc refer-
ences.

ASSOCIATION: Instytut fizyky AN USSR (Physics Institute AS Ukr
                SSR)

SUBMITTED: November 12, 1959

Card 3/3

MAL'NEV, A.F. [Mal'niev, A.F.]; YESEL'SON, M.P. [IEsel'son, M.P.]

Recording device for a spectrophotometer. Ukr. fiz. zhur. 5
no. 5:640-644 S-0 '60.   (MIRA 14:4)

1. Institut fiziki AN USSR.
                              (Spectrometer)

9.4160 (also 2801)
11.8100

AUTHORS: Dzhagatspanyan, R.V., Maksimov, M.P. (Deceased)
and Yesel'son, M.P.

TITLE: A Device for Recording High-speed Processes

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No. 1,
pp. 132 - 137

TEXT: Continuous recording of the changes of infra-red
spectra during chemical reactions is of considerable practical
importance but very often the speed of response of the infra-
red receivers (wavelengths from 2 - 20 μ or more) is not fast
enough to give a suitable resolving time. A faster device was
proposed by Bonch-Bruyevich and Imas (Ref. 1) in 1955 but it
resulted in the deterioration of the signal-noise ratio of
the receiver. In the following a high-speed recording instru-
ment with an amplifier furnished with a bolometer inertia-
correcting circuit is described. The recording speed for a
single spectrum can be as high as 10^{-2} or 10^{-3} sec, the
resolving time being 10^{-4} to 10^{-5} sec. The instrument can
work as a pyrometer (recording rapid changes of the incident

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A Device for Recording S/120/61/000/001/042/062
E192/E382

thermal radiation) or it can perform measurements at a chosen
point of the spectral range. When operating as a spectrometer
the instrument can register infra-red spectra $I = f(\lambda)$ of
various materials at speeds from $1 - 10^{-3}$ sec. The limiting
resolving time of the instrument is 6×10^{-3} which is
equivalent to 10^{-4} sec. Consequently, by recording a successive
range of spectra it is possible to plot the spectrum
$I = \varphi(\lambda, t)$ of a chemical reaction. When used as a pyrometer
the instrument can register rapid changes of the radiation
intensity as a function of time $(I = f(t))$ at speeds ranging
from $1 - 10^{-3}$ sec, the limiting resolving time being of the
order of 10^{-4} sec. This is necessary in solving various
engineering problems such as the investigation of explosions,
rapid combustion, etc. In both types of operation a cali-
brating voltage curve is recorded simultaneously with the
curves representing the investigated processes; the cali-
bration curve permits determination of the duration of the
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A Device for Recording ....

process and its significant sections. The spectra are recorded by means of a long-persistence cathode-ray tube (oscillograph ЭНО-1 (ENO-1)). The instrument consists of the following units: 1) a pre-amplifier which is situated in the immediate vicinity of the receiver; 2) the main amplifier, provided with an inertia-correction circuit; 3) an electronic switch having two inputs and operating at the frequency of 200 kc/s; 4) a calibration oscillator producing sinusoidal waveforms having frequencies of 10, 50, 100, 500 and 1 000 c.p.s; 5) a control pulse generator giving rectangular pulses repeated at a frequency of 50 c.p.s; 6) a synchronisation amplifier, permitting synchronisation of the time base by a positive or negative internal signal; 7) a triggered time base operating at frequencies 1, 3, 10, 30, 100, 300 and 1 000 c.p.s. and power supplies comprising high-voltage and low-voltage rectifiers and an electronic stabiliser having a stabilisation coefficient of 1200. The main amplifier consists of an input cathode follower, a two-stage amplifier furnished with high- and low-frequency correction circuits and an inertia-correcting circuit which is separated

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E192/E382

A Device for Recording ....

from the amplifier by means of a cathode follower. The band-
width of the amplifier at 3 db extends from 1 c.p.s. to
0.8 Mc/s. The inertia-correction is achieved by means of an
RC network. The range of the time constants of the receivers
is divided into the following sub-ranges: 1-3, 3-8, 5-15,
10-30 and 30-100 µs. The desired sub-range is provided by
switching-in a suitable capacitance, while the continuous
control is achieved by varying the resistance. The electronic
switch consists of a multivibrator operating at a frequency
of 200 kc/s, a limiter and two controlled tubes. The switch is
perhaps unusual in that a cathode-coupled feedback stage is
used as the limiter. The calibration oscillator is based on the
usual RC circuit. The synchronisation amplifier consists of two
tubes, while the time-base generator comprises two multi-
vibrators, a charging pentode and a cathode follower. The
time constant of the correction network should be made equal
to the time constant of the receiver before the instrument
can be used in measurements. This is done by introducing a

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E192/E382

A Device for Recording ....

rotating (modulating) disc between the source and the
receiver, the purpose of the disc being to produce light
pulses having a sharp leading edge. The instrument was
tested as a pyrometer, a photoresistor having a time constant
of 40 µs being used as a receiver. There are 4 figures
and 1 Soviet reference.

SUBMITTED: December 28, 1959

Card 5/5

YESEL'SON, M.P. [IEsel'son, M.P.]; KREMENCHUGSKIY, L.S.
[Kremenchuhs'kyi, L.S.]; MAL'NEV, A.F. [Mal'niev, A.F.]

Temperature variations of the characteristics of input
transformers of low-resistance thermal receivers. Ukr.
fiz. zhur. 6 no.3:420-422 My-Je '61.   (MIRA 14:8)
              (Electric transformers--Thermal properties)

MAL'NEV, A.F. [Mal'niev, A.F.]; YESEL'SON, M.P. [IEsel'son, M.P.];
KREMENCHUGSKIY, L.S. [Kremenchuhs'kyi, L.S.]

Characteristics of measuring devices for IKS-11 and IKS-12
spectrometers with modulation of the radiation flux. Ukr. fiz.
zhur. 6 no.6:881-883 N-D '61.   (MIRA 16:5)

1. Institut fiziki AN UkrSSR, Kiyev.
                        (Spectrometer)

35096
S/185/62/007/001/006/014
D299/D302

9.2510 (1040,1159,1532)

AUTHORS: Yesel'son, M.P., Kremenchuhs'kyy, L.S., and Mal'nyev, A.F.

TITLE: Noise characteristics of signal pre-amplifiers of low-ohmic thermal receivers

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 1, 1962, 46 - 52

TEXT: Low-frequency noises were investigated of certain practical pre-amplifier circuits with an input tube operating under floating-grid conditions. The following types of tubes were studied: 6ЖIЖ (6ZhIZh), 6С4П (6S4P), 6Н14П (6N14P), and 6Н16Б (6N16B). The last 2 types were investigated in negative-feedback pre-amplifier circuits. A noise analyzer, operating at the fixed frequencies of 5, 9, 15 and 20 cycles, was used. The noise analyzer consisted of a pre-amplifier, selective amplifier, detector, low-frequency filter and millivoltmeter. Background noises of tubes were investigated as a function of the filament current and the value of the negative feed-

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Noise characteristics of signal...

S/185/62/007/001/006/014
D299/D302

back; by using negative feedback it is possible to reduce the noise
level two- to threefold. If fairly large transformers are used, the
noise of the input tubes can be easily covered (at frequencies of 15
- 20 cycles); if however, miniaturized input transformers, operating
at very low frequencies, are used, this becomes much more difficult.
A figure shows the gain factor of transformers with permalloy core.
By comparing the obtained data, it was found that the tube 6S4P yiel-
ded lowest noise-level. The following graphs are given: Frequency de-
pendence of the gain factor of a transformer, dependence of optimum
gain of transformer on its output noise-level, dependence of back-
ground noise of transformer on the number of primary windings, and
the frequency dependence of pre-amplifier noises (with one of the
transformers). The deviation of the measured noise-values from the
calculated ones, did not exceed 15 %. Conclusions: It is feasible to
design a measuring device with background noise-level of the order of
$1 - 2 \cdot 10^{-10}$v at a frequency of 9 - 20 cycles with $\Delta f = 1$ cycle. From
the tabulated data and the graphs it is possible to estimate the noi-
ses in actual cases. There are 6 figures, 1 table and 5 references:
4 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-

Card 2/3

Noise characteristics of signal ...   S/185/62/007/001/008/01.
                                             D299/D302

language publication reads as follows: J.U. White, M.D. Liston, JOSA,
40, no. 1, 36, 1950.

ASSOCIATION: Instytut fizyky AN URSR (Institute of Physics of the AS
             UkrRSR), Kyyiv

SUBMITTED: March 14, 1961

                                                              X

Card 3/3

LIZOGUB, A.F., kand. khim. nauk; SKLYAR, V.T., kand. khim. nauk; YESEL'SON, M.P.

Analyzer of the lubricant content in paraffin. Neft. i gaz. prom. no.4:56-58 O-D '63. (MIRA 17:12)

1. UkrNIIgiproneft'.

MAL'NEV, A.F.; YESEL'SON, M.P.

Recording unit with low-resistance bolometers for spectroscopic
instruments. Prib. i tekh. eksp. 6 no.1:137-140 Ja-F '61.
(MIRA 14:9)

1. Institut fiziki AN USSR.
(Electronic instruments)

KHODZHIBAYEV, N.N.; YESENBEKOV, A.

Effect of irrigation from deepened canals on the regime of underground waters. Uzb. geol. zhur. 8 no.1:62-67 '64.

(MIRA 18:5)

1. Institut gidrogeologii i inzhenernoy geologii AN UzSSR.

YESENBEKOV, Seil'bek; TURADILOV, Dosbol; IL'YASHENKO, L.V., redaktor;
ZLOBIN, M.V., tekhnicheskiy redaktor

[Experience in increasing the fertility of sheep; the use of
pregnant mar's serum] Opyt uvelicheniia mnogoplodiia ovets;
primenenie SZhK. Alma-Ata, Kazakhskoe gos. izd-vo, 1956. 14 p.
(MIRA 9:10)

1. Starshiy chaban kolkhoza imeni Lenina, Il'ichevskogo rayona,
Yuzhno-Kazakhstanskoy oblasti. (for Yesenbekov, Turadilov)
    (Sheep breeding)

AID P - 4291

Subject   : USSR/Engineering

Card 1/1   Pub. 128 - 16/25

Author   : Yesenberlin, R., Kand. Tech. Sci.

Title   : Copper soldering in an atmosphere of nitrogen

Periodical : Vest. mash., #2, p. 56-57, F 1956

Abstract   : Heating copper in the presence of hydrogen or other
             reducing gases has bad effect of reducing its strength
             and making it brittle. Satisfactory results of tests
             are reported in which copper was soldered in a stream
             of nitrogen. Diagram. 5 references, 1946-1955.

Institution : None

Submitted : No date

YESENBERLIN, R.Ye., kandidat tekhnicheskikh nauk.

Using dunite for thorough removal of oxygen from inert gases.
Khim.prom. no.4:244-245 Je '56.   (MLRA 9:10)
(Dunite) (Oxygen) (Gases, Rare)

PHASE I BOOK EXPLOITATION   1248

Yesenberlin, Ravnak Yesenberlinovich

Payka metallov v pechakh s gazovoy sredoy (Controlled-atmosphere
    Furnace Brazing of Metals) Moscow, Mashgiz, 1958. 93 p. 7,000
    copies printed.

Reviewer: Petran', K.V., Candidate of Technical Sciences; Ed.;
    Vologdin, V.V., Engineer; Ed. of Publishing House: Borodunina, I.A.;
    Tech. Ed.: Pol'skaya, R.; Managing Ed. for Literature on Machine-
    building Technology (Leningrad Division, Mashgiz): Naumov, Ye.P.,
    Engineer.

PURPOSE: The book is intended for engineers and technicians of the
    machine-building industry interested in brazing.

COVERAGE: The physical and chemical principles and technological
    characteristics of brazing metals and alloys in controlled atmos-
    pheres are presented. The author describes equipment used in con-
    trolled atmosphere brazing, filler metals and gases used in this
    process. There are 31 references, 26 of which are Soviet and 5
    English.
Card 1/4

1248

Controlled-atmosphere (Cont.)

Card 2/4

Controlled-atmosphere (Cont.)   1248

AVAILABLE: Library of Congress

                                    GO/sfm
                                    2-24-59

Card 4/4

PHASE I BOOK EXPLOITATION   SOV/3417

Yesenberlin, Ravnak Yesenberlinovich

Payka metallov (Soldering and Brazing of Metals) Moscow, Mashgiz,
   1959. 179 p. 14,000 copies printed.

Ed.: S.V. Lashko-Avakyan, Candidate of Technical Sciences; Ed. of
   Publishing House: N.S. Stepanchenko; Tech. Ed.: V.D. El'kind;
   Managing Ed. for Literature on Heavy Machine Building: S.Ya.
   Golovin, Engineer.

PURPOSE: This book is intended for process engineers, foremen, and
   skilled workers in the soldering and brazing of metals.

COVERAGE: The book deals with modern methods and equipment for the
   soldering and brazing of metals. Solders, fluxes, and gaseous
   media used in soldering and brazing operations are discussed. Ba-
   sic information is given on the factors affecting the quality of
   soldered and brazed joints. Fields of application for the methods
   discusses are indicated. No personalities are mentioned. There
   are 38 references, all Soviet.

Card 1/4

Soldering and Brazing (Cont.)   SOV/3417

TABLE OF CONTENTS:

Card 2/4

Soldering and Brazing (Cont.)   SOV/3417

   Indirect heating method   128
   Characteristic features of resistance methods   129

Ch. VIII. Brazing in Furnaces
   Brazing in a gas atmosphere   131
   Brazing with hard fluxes   131
   Brazing in vacuum   149
                                                                150

Ch. IX. Brazing With High-Frequency Currents   154
   Installations with high-frequency current   155
   Brazing with hard fluxes   162
   Brazing in a gas atmosphere   166
   Brazing in vacuum   167

Ch. X. Inspection of the Quality of Soldered and Brazed Joints   170
   Defects in soldered and brazed joints   170
   Quality inspection of soldered and brazed products   172

Bibliography   172

AVAILABLE: Library of Congress   (TT 267 .E79)

Card 4/4   VK/jb
                                                             5-24-60

PHASE I BOOK EXPLOITATION   SOV/6307

Yesenberlin, Ravnak Yesenberlinovich

Payka metallov v pechakh s gazovoy sredoy (Brazing of Metals in Furnaces
    With Controlled Atmosphere). 2d ed., rev. and enl. Moscow, Mashgiz,
    1962. 127 p. Errata slip inserted. 7000 copies printed.

Reviewer: I. A. Zaks, Engineer; Ed.: Z. M. Ryzhik, Engineer; Ed. of Pub-
    lishing House: I. A. Denina; Tech. Ed.: A. A. Bardina; Managing Ed.
    for Literature on Machine-Building Technology (Leningrad Department,
    Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: This booklet is intended for engineering and scientific personnel.

COVERAGE: The book reviews the physicochemical fundamentals and tech-
    nological features of brazing metals and alloys in gaseous media and des-
    cribes the equipment used for this purpose. The most frequently used

Card 1/5
   1/2

Brazing of Metals (Cont.)

SOV/6307

brazing alloys and gases employed in nonoxidizing brazing processes are discussed. No personalities are mentioned. There are 19 references: 12 Soviet, 5 English, 1 German, and 1 Czech.

TABLE OF CONTENTS:

Card 2/5

2/2

MARGULIS, Ye.M., insh.; GUBIN, V.I., insh.; YESENGULOV, T.Ye.

Achievements of mine builders in shaft sinking in
Dzheskazgan. Shakht.stroi. 4 no.9:18-20 S '60.
(MIRA 13:8)

1. Dzheskazganskoye shakhtoprokhodcheskoye upravleniye
tresta Stalinshakhtoprokhodka (for Margulis). 2. Institut
gornogo dela Akademii nauk KazSSR (for Gubin, Yesengulov).
(Dzheskazgan—Shaft sinking)

YESENIN, K.S.; BOGOMOLOV, M.D., nauchnyy red.; PAKHOMOVA, M.A., red.izd-va; TEYYERMAN, T.M., tekhn.red.

[Mechanic I.D.Voropaev] Slesar' I.D.Voropaev. Moskva, Gos. izd-vo lit-ry po stroit.i arkhit., 1958. 25 p.   (MIRA 12:9)
          (Mechanics (Persons))

ANTIPIN, /e.B., gornyy inzhener-elektromekhanik; YESENIN, N.I., gornyy
inzhener-elektromekhanik.

New automatic control to limit the speed of hoisting machines.
Gor.zhur. no.10:61-63 O '56.   (MLRA 9:12)
    (Mine hoisting) (Automatic control)

L 23189-66   EWT(m)/EWP(t)   IJP(c)   JD/JG
ACC NR: AP6006944   SOURCE CODE: UR/0075/66/021/002/0239/0241

AUTHOR: Goryushina, V. G.; Yesenina, N. V.

ORG: State Scientific Research and Planning Institute of the Rare Metal Industry,
Moscow (Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redko-
metallicheskoy promyshlennosti)

TITLE: Determination of phosphorus in arsenic and arsenic trioxide

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 2, 1966, 239-241

TOPIC TAGS: phosphorus, arsenic, trace analysis

ABSTRACT: To determine trace amounts of phosphorus in arsenic, after the arsenic
sample has been dissolved in acid, it is necessary first of all to remove the arse-
nic from the solution. A procedure is proposed in which the arsenic sample is dis-
solved in hydrochloric acid containing bromine; As is thus converted to the trival-
ent state (not to the pentavalent state, as when an HCl-HNO$_3$ mixture is used), and
most of it is readily driven off by boiling. The remaining arsenic is removed by
extracting once with carbon tetrachloride from a 9 N HCl solution containing 0.1

UDC: 543.70

Card 1/2

L 23189-66
ACC NR: AP6006944

mol KI per liter. Experiments with arsenic and arsenic trioxide showed that after this treatment there always remains less than 1 μg of arsenic in the solution, this amount having no effect on the determination of phosphorus. They also showed that no phosphorus is lost in the course of the analysis. The sensitivity of the determination is 0.05 μg P, which for a 1 g sample permits the determination of amounts as low as $1 \cdot 10^{-5}\%$ P. The apparatus used for distilling off the arsenic is described. Orig. art. has: 1 figure, 1 table.

SUB CODE: 07/   SUBM DATE: 08Feb65/   ORIG REF: 004/   OTH REF: 000

Card 2/2

PHASE I BOOK EXPLOITATION   SOV/2660

16(1)
Vsesoyuznyy matematicheskiy s'yezd. 3rd, Moscow, 1956

Trudy. t. 4: Kratkiye soderzhaniye sektsionnykh dokladov. Doklady
inostrannykh uchenykh (Transactions of the 3rd All-Union Mathema-
tical Conference in Moscow. vol. 4: Summary of Sectional Reports.
Reports of Foreign Scientists) Moscow, Izd-vo AN SSSR, 1959.
247 p. 2,800 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Matematicheskiy institut.

Resp. Ed.: S.M. Shershakov; Editorial Board: A.A. Abramov, V.G.
Boltyanskiy, A.M. Vasil'yev, B.V. Medvedev, A.P. Myshkis, S.M.
Nikol'skiy (Resp. Ed.), A.G. Postnikov, Yu. V. Prokhorov, K.A.
Rybnikov, F.L. Ul'yanov, V.A. Uspenskiy, M.G. Chetayev, O. Ye.
Editor, and A.I. Shirshov.

PURPOSE: This book is intended for mathematicians and physicists.

COVERAGE: This book is Volume IV of the Transactions of the Third All-
Union Mathematical Conference, held in June and July 1956. The
book is divided into two main parts. The first part contains sum-
series of the papers presented by Soviet scientists at the Con-
ference that were not included in the first two volumes. The
second part contains the text of reports submitted to the editor
by non-Soviet scientists. In those cases when the non-Soviet sci-
entist did not submit a copy of his paper to the editor, the title
of the paper is cited and, if the paper was printed in a previous
volume, reference is made to the appropriate volume. The papers,
both Soviet and non-Soviet, cover various topics in number theory,
algebra, differential and integral equations, function theory,
functional analysis, probability theory, topology, mathematical
problems of mechanics and physics, computational mathematics, and the
mathematical logic and the foundations of mathematics, and the
history of mathematics.

Section on Mathematical Logic and the Foundations of Mathematics

Yesenin-Vol'pin, A.S. (Moscow). On the second Gödel theorem   84
Sokhvili, L.P. (Tbilisi). On the subject of mathematics   83
Bartsov, A.N.-A. (Samarkand). On the theory of surfaces in
of particular projective type   80
Finikov, S.P. (Moscow). Transformation of V Cartan manifolds   79
Plemons, B.I. (Leningrad). Automatic study of space-time
structures   78
Hinkiyev, F.V. (Sverdlovsk). Binary anamorphosis of analytic
equations   78
Herich, M.Y. (Rostov-na-Donu). Generalisation of the
Fubert theorem, derived by means of a multidimensional de-
scriptive geometry   77

Card 16/38

YESENIN-VOL'PIN, Aledsandr Sergeyevich

A leaf of spring. New York, Praeger (1961)
173 p.
Added t. -p. in Russian: Vesenniy list.
"With the text appearing both in the original
Russian and in the English translation by Geoge
Reavey."

L 04936-67   EWT(d)/EWT(1)/EWT(m)/EWP(w)   IJP(c)   EM/WW
                                     SOURCE CODE: UR/0043/66/000/003/0055/0063

ACC NR: AP6028359

AUTHOR: Buravtsev, A. I.; Yesenina, N. A.

ORG: none

TITLE: Interaction between rarefaction waves and shock waves

SOURCE: Leningrad. Universitet. Vestnik. Seriya matematiki, mekhaniki i astronomii, no. 3, 1966, 55-63

TOPIC TAGS: shock wave interaction, shock wave propagation, shock wave, rarefaction wave structure, mechanical stress

ABSTRACT: The elastic-plastic behavior of a rod is investigated. One end of the rod is subjected to a constant load which is suddenly removed according to a linear law. The stress-strain curve consists of two connected sections, one straight and the other parabolic. Specific attention is given to the collision between the rarefaction wave and a shock wave which causes a discontinuity within the rod. The secondary loading wave propagates to the left of the rod, and the shock wave to the right. An elastic wave radiation is possible. In conclusion,

UDC: 539.38

Card 1/2

L 04936-67

ACC NR: AP6028359

the authors express their deep gratitude to A. A. Grib for valuable advice in the course of this work. Orig. art. has: 61 formulas and 9 figures.

SUB CODE: 20/   SUBM DATE: 03Feb65/   ORIG REF: 005/   OTH REF: 002

kh

Card   2/2

L 23189-66   EWT(m)/EWP(t)   IJP(c)   JD/JG

ACC NR: AP6006944   SOURCE CODE: UR/0075/66/021/002/0239/0241

AUTHOR: Goryushina, V. G.; Yesenina, N. V.

ORG: State Scientific Research and Planning Institute of the Rare Metal Industry,
Moscow (Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redko-
metallicheskoy promyshlennosti)

TITLE: Determination of phosphorus in arsenic and arsenic trioxide

SOURCE: Zhurnal analiticheskoy khimii, v. 21, no. 2, 1966, 239-241

TOPIC TAGS: phosphorus, arsenic, trace analysis

ABSTRACT: To determine trace amounts of phosphorus in arsenic, after the arsenic
sample has been dissolved in acid, it is necessary first of all to remove the arse-
nic from the solution. A procedure is proposed in which the arsenic sample is dis-
solved in hydrochloric acid containing bromine; As is thus converted to the trival-
ent state (not to the pentavalent state, as when an HCl-HNO_3 mixture is used), and
most of it is readily driven off by boiling. The remaining arsenic is removed by
extracting once with carbon tetrachloride from a 9 N HCl solution containing 0.1

UDC: 543.70

Card 1/2

L 23189-66
ACC NR: AP6006944

mol KI per liter. Experiments with arsenic and arsenic trioxide showed that after this treatment there always remains less than 1 µg of arsenic in the solution, this amount having no effect on the determination of phosphorus. They also showed that no phosphorus is lost in the course of the analysis. The sensitivity of the determination is 0.05 µg P, which for a 1 g sample permits the determination of amounts as low as $1 \cdot 10^{-5}\%$ P. The apparatus used for distilling off the arsenic is described. Orig. art. has: 1 figure, 1 table.

SUB CODE: 07/   SUBM DATE: 08Feb65/   ORIG REF: 004/   OTH REF: 000

Card 2/2

YESENINA, Ye.P.

Treatment of eczema with plegomamazine. Vest.derm.i ven. 34
no.6:65-66 '60.
(MIRA 13:12)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - prof.
N.N. Chumakov) Yaroslavskogo meditsinskogo instituta.
(ECZEMA)   (PHENOTHIAZINE)

YESENIN-VOL'PIN, A.S.

PHASE I BOOK EXPLOITATION   SOV/5088

Akademiya nauk SSSR

Primeneniye logiki v nauke i tekhnike (Application of Logic in
   Science and Technology) [Moscow] Izd-vo AN SSSR [1960] 357 p.
   Errata slip inserted. 10,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR.

Editorial Board: Resp. Ed.: I. V. Tavanets, E. Ya. Kol'man,
   G. N. Povarov and S. A. Yanovskaya; Ed. of Publishing House:
   R. Yu. Rozenberg; Tech. Ed.: S. T. Markovich.

PURPOSE: This book is intended for scientists interested in math-
   ematical and symbolic. logic.

COVERAGE: The book is a collection of 16 articles in which the
   authors discuss problems of mathematical logic and its appli-
   cation to computers, linguistics, zoology, methodology and
   various fields of technology. No personalities are mentioned.
   References follow all but one article.

Card 1/4

YESENKIN, V.

The trade-union group as a united and harmonious group. Sov. profsoiuzy 4 no.1:53-54 Ja '56.   (MIRA 9:4)

1.Profgrupporg slesarno-mekhanicheskoy masterskoy 4-go stroyuchastka tresta "Sevkavtransstroy".
            (Rostov--Trade unions)

IZMAILOV, V.V., Cand.Tech.Sci.

Optimal value of the protective capacity of inclined shaft gear.
39 no.12:25-26 D '61.

1. Trest Prunseugol'.

KOSAREV, M.K.; YESENKOV, V.M.

     Wear of the sections and chains of the SKR-20 conveyor in
     transporting anthracite. Ugol' 38 no.6:35-37 Je '63.
                                      (MIRA 16:8)

     1. Trest Frunzeugol'.
                 (Conveying machinery)   (Mechanical wear)

YESENKOV, V.M.

Breaking of coal during its transportation within a mining section.
Ugol' 38 no.8:45-47 Ag '63.   (MIRA 17:11)

1. Nachal'nik tekhnicheskogo otdela tresta Frunzeugol'.

KOSAREV, M.K.; YESENKOV, V.M.

Work practices of the Frunzeugol' Trust mines in rapid mining of develop-
ment workings. Ugol' 40 no.6:18-19 Je '65.   (MIRA 18:7)

1. Trest Frunzeugol'.

SARSENBAYEV, R.; YESENOV, K.

Scientific syntax of the Kazakh language [in Kazakh]. Vest.AN
Kazakh,SSR 18 no.3:90-92 Mr '62.   (MIRA 15:3)
                    (Kazakh language—Syntax)

YESENOV, M.

PHASE I BOOK EXPLOITATION   760

Promyshlennost' Kazakhstana za 40 let; sbornik statey (The Industry
   of Kazakhstan During the Last Forty Years; Collection of Articles)
   Alma-Ata, Kazgosizdat, 1957. 150 p. 13,000 copies printed.

Gen. Eds.: Brover, I.M., Professor and Yerofeyev, N.A., Docent;
   Eds.: Spivak, F.L. and Il'yashenko, L.V.; Tech. Ed.:
   Zlobin, M.V.

PURPOSE: This is a popular book for the general reader.

COVERAGE: This collection of articles, compiled by 12 contributors,
   relates the story of industrial Kazakhstan under Soviet rule.
   The introductory chapter surveys the Kazakh economy in its
   entirety, whereas the other chapters deal with individual
   industries. The book contains data and figures on almost every
   aspect of Kazakh industrial endeavor. There are 14 photographs,
   1 map, 26 tables, and 5 diagrams. No personalities are mentioned
   and there are no references.

Card 1/6

The Industry of Kazakhstan (Cont.)   760

TABLE OF CONTENTS:

Card 2/6

The Industry of Kazakhstan (Cont.)   760

Kazakhstan occupies the first place in the world in vanadium
and chrome iron ore reserves. However, the location of
vanadium ore deposits is not given. Furthermore, the data on
molybdenum are confusing. The chapter gives figures on the
planned Karaganda Iron and Steel Combine.

Kozhakhmetov, K., Yesenov, M., and Shaukenbayev, T. (Candidate
of Economic Sciences). The Kazakh Coal Industry   37
    The description of coal deposits is limited to the fields of
    Karaganda. Ekibastuz coal is being used by power plants. The
    authors give some data on equipment used. Future plans are
    discussed at some length.

Kozhakhmetov, Kh., Yesenov, M., and Shaukenbayev, T. The Kazakh
Petroleum Industry   56
    The article contains data on total oil reserves, but pro-
    duction figures are outdated. The problem of refining is
    treated superficially.

Card 3/6

The Industry of Kazakhstan (Cont.)   760

Kozhakhmetov, Kh., Yesenov, M., and Shaukenbayev, T. The Kazakh
Power Industry   64
      The article uses practical examples to demonstrate the
      advantages of hydroelectric power over thermal electric
      power. The existing power projects are listed, although
      data on them are outdated. Information on power grids and
      power lines is available.

Sklyarov, P.P. The Kazakh Machinery Industry   71
      The article gives specifications of drawing mills made at
      the Alma-Ata Heavy Machinery Works (AZTM). Ten other
      enterprises are mentioned together with some of their
      products; another 10 plants are listed as being under
      construction or planned.

Bekturov, A.B., Academician, and Suvorov, B.V., Candidate of
Technical Sciences. The Kazakh Chemical Industry   80
      The article lists a number of chemical enterprises, mainly
      plants producing fertilizers, and discusses some of their
      problems. Other items discussed are potash salt, borates,
      and synthetic rubber.

Card 4/6

The Industry of Kazakhstan (Cont.)   760

Chugay, A.M., Candidate of Economic Sciences. Construction and
the Production of Building Materials in the Kazakh SSR   90
   The building materials industry is still not fully
   developed and the Republic relies heavily on imports,
   especially the import of cement. Projects are discussed to
   solve some of these problems.

Lavrova, I.V., Candidate of Economic Sciences. The Transporta-
tion Network of Kazakhstan   101
   This is a very thorough survey of all new and planned rail-
   ways and highways, and of the water transportation lines.
   Some turnover data are given in percent.

Yerofeyev, N.A., Candidate of Economic Sciences. Light
Industries   117
   Absolute figures can be deduced from data given in
   percentages.

Card 5/6

The Industry of Kazakhstan (Cont.)   760

Ratmanov, B.Ya. The Food-processing Industry   131
    Absolute figures (as of 1955) are given.

Brover, I.M., Professor. Concluding Notes   147
    The article explains the system of economic regions.

AVAILABLE: Library of Congress

Card 6/6   MM/jmr
                                      11-24-58

YESENOV, M. E.

ALI-ZADE, A.; MASHRYKOV, K.; ESENOV, M.

Origin and conditions under which petroleum occurs.   Izv.AN Turk.SSR no.2:43-52 '51.   (MLRA 6:8)

1. Institut geologii Akademii nauk Turkmenskoy SSR.
   (Soviet Central Asia--Petroleum--Geology) (Geology--Petroleum--
                                               Soviet Central Asia)

YESENOV, M.E.

Lithology of Pliocene deposits in the Balkhan region. Izv.AN Turk.
SSR.Ser.fiz.-tekh., khim.i geol.nauk no.1:88-93 '61.   (MIRA 14:8)

1. Institut geologii AN Turkmenskoy SSR.
                (Balkhan region--Petrology)

YESENOV, Shakhmardan

> The minister of geology of Kazakhstan Sh. Esenov talks about
> the wealth of virgin deposits. IUn. tekh. 7 no.8:15-18 Ag '63.
> (MIRA 16:10)
>
> 1. Ministr geologii i okhrany nedr Kazakhstana.

VEDERNIKOV, N.N.; YESENOV, Sh.Ye.

Manifestations of amphibole mineralization in Dzhezkazgan
District and geological criteria to be used in exploring for
them. Vest.Kazakh.SSR 16 no.9:49-56 S '60.   (MIRA 13:9)
          (Dzhezkazgan District--Amphibole)

YESENOV, Rakhim Makhtumovich

[Journey under the eternal sun; story about my republic]
Puteshestvie pod vechnym solntsem; rasskaz o moei respub-
like. Ashkhabad, Turkemnskoe gos.izd-vo, 1962. 56 p.
(MIRA 16:7)

(Turkmenistan--Description and travel)

ANTROPOV, P.Ya.; BOGATYREV, A.S.; YESENOV, Sh.Ye.; SATPAYEVA, T.A.;
    SATPAYEV, K.I.; SEYFULLIN, S.Sh.

    Outstanding geologists and Dzhezkasgan prospector. Vest.AN Kazakh.
    SSR 16 no.10:81-82 O '60.   (MIRA 13:10)
               (Shtifanov, Vasilii Ivanovich, 1910-)

S/169/63/000/002/058/???
D263/D507

AUTHOR: Yesenov, Sh. Ye.

TITLE: Towards a more rapid exploration of the mineral riches
             of Kazakhstan

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 2, ab-
             stract 2D13 (Izv. AN KazSSR, Ser. geol., 1962, no. 1,
             (46), 3-7 (summary in Kaz.))

TEXT: According to surveyed amounts of copper, zinc, lead, cadmium,
silver, bauxites, tungsten, chromites, phosphorites and coal, Kaz-
SSR occupies a leading position. Results of geological and geophy-
sical investigations, and of deep boring at Mangyshlak show that
within the South Mangyshlak depression there exists real promi-
of discovering large scale oil and gas deposits. In connection
with the perspectives for oil and gas, shown by the well Ural-kur.
... Ural'-Syrdar'insir regi...
... ... appreciat..., ...
... that new regions of Kazakhstan will be surveyed ...

Card 1/2

Towards a more ...   S/169,53/000/003-0 : · ::
                                            D263/D307

next few years, ensuring the establishment of a third major gas-
and oil-producing area of the country. The known reserves of Ka-
zakhstan iron ore may produce 120 - 130 million tons of ore per
year. The output of the Sokolovsko-Sarbayskiy mine should first of
all be raised to 50 million tons/year, as compared with the pro-
jected 26.5 million tons/year. An important task is the establish-
ment of nonferrous metallurgy with high quality ores. New depo-
sits of lead-zinc ores have been found in Altay, large scale de-
posits of nonferrous and rare metals in Central Kazakhstan, baux-
ites in the Kustanayskaya and nickel in the Aktyubinskaya regions,
but the potential of the republic is far from exhausted, particu-
larly in the Dzhezkazganskiy region. The overall coal reserves in
Central Kazakhstan are in excess of 100 milliard tons, of which
20 milliard tons have been explored. Exploratory surveys should be
directed at deposits of coking and low-ash high energy coals, sui-
table for working by the open-pit method. It is necessary to ob-
tain greater knowledge regarding the disposition and nature of un-
derground waters. More rapid familiarization with the deposits of
agronomic ores required urgent resolution. / Abstracter's note:
Complete translation. 7
Card 2/2

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